TWENTIETH YEAR.

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## IRRIGATION IN NEBRASKA.

The Subject Illustrated by the Successful Experience of Colorado.

HOW WATER IS APPLIED TO ARID LANDS.

Operations in the South Platte Country, Just Across the State Line -How the State Assists the Work.

(Third Article.) The arid region of Nebraska adjoins the state of Colorado on the west and south. On both sides of this imaginary line the soil, the climate and all natural conditions are the same. But on one side there is agricultural prosperity of a high and growing order. On the other side there is poverty and distress. On one side lies the garden, on the other side the desert. During the past season the farmers living in the valley of the South Platte in Colorado raised train loads of potatoes and sold them for fabulous prices. In the same period the farmers living in the valley of the South Platte in Nebraska raised scarcely anything, and many of them are now receiving food and clothing from the state and they must look to the same source for the seed of future crops.

Nebraska had the advantages of earlier settlement. She has a larger population and more wealth in the aggregate, but in the matter of irrigation she is but an infant to a man when compared with Colorado. And irrigation in Colorado has only begun.

These facts are not, however, as discreditable to Nebraska as at first appears. Nobody ever pretended that Colorado could depend on rainfall. Western Nebraska, with the aid of unscrupulous land agents, was persuaded that she could. Experience is a hard master, but we are learning the lessson at last, and the late severe drouth may turn out to be a blessing in disguise.

As the best possible means of illustrating how irrigation can be accomplished here, this paper will undertake to trace how it has been accomplished in Colorado in the face of similar difficulties.

I.—BEGINNINGS OF THE WORK IN COLORADO. The total area of Colorado is 66,560,000 acres. Of this vast domain 26,560,000 acres is mountain land, hopeless for agritimber. The balance, of 40,000,000 acres, is composed of plateau, plain and valley, and has a soil fit to grow any crops that will thrive in this latitude and altitude. But it is perfectly arid.

When the first pioneer settler pushed his way across the plains and into Colorado, over thirty years ago, he found only a few thousand of these millions of acres under cultivation, and those only by means of rude ditches constructed by unskillful Mexican farmers. Now, according to the latest statis-

company," an association of Scotch capitalists. Their first undertaking was the construction of the Larimer and Weld canal. which takes its source in the Cache work as is to be found in the state. The dam la Poudre river, two miles northwest of Fort Coilins, and runs east across Larimer and Wold counties for a distance of forty-five miles. It is twenty-five to thirty feet wide and from five to seven feet deep. It has a capacity sufficient to irrigate high state of cultivation. This large canal

40,000 acres, almost all of which are now in a has now been in operation nearly ten years, Three small reservoirs are used in connection with this enterprise. The success of this canal led the same capitalists to undertake a larger and more difficult project. This was to tap the Platte

river as it leaves the mountains and develop the lands lying around Denver. The scheme had been long talked of and for years had waited only for the assistnce of capital. The construction of this "High Line canal," as it is called, was begun early in the spring of 1880 and continued without cessation till 1883. It is a fine piece of engineering, with its dam in the river, its tunnel at the head of the canal, its flume in the canon, and its numerous flumes across the creeks that lie in its course. The main caual is seventy miles long, and forty feet wide for a large part of its length. It has a branch about tweaty-five miles long and of smaller dimensions. It waters between fifty and sixty thousand acres. It cost

This was the beginning of irrigation in Colorado. It demonstrated that if water could be applied to the arid soil the desert would blossom as the rose. It converted timid, unbelieving capital into an aggressive ally of the state's development. With the success of these two undertakings of the English company, irrigation was established as a great and promising factor in the life of Colorado. Capital came from England, from Holland, from New York, from Chicago and St. Louis, to seek investment where returns were assured. And Denver itself-a hint for Omaha-readily invested in irrigation enterprises the capital it had accumulated with phenomenal rapidity in mining and real estate. Nebraska stands today where Colorado stood ten years ago.

II.-IN NORTHERN COLORADO.

From a Nebraska standpoint the most interesting part of irrigated Colorado is that portion lying between Denver and the Nebraska line, and especially in the valley of the South Platte. The accompanying map culture, but rich in minerals and shows the developments in this region at a glance.

This part of Colorado is precisely like our arid region. It has the same soil and climate and draws its water supply from one of the sources which we must utilize. The state line that separates Nebraska from Colorado is only imaginary, but the line that runs between irrigated prosperity and arid distres is a real line, plainly marked on the surface of the earth.

The association of foreign capitalists al

Cache la Poudre river, in the northwestern portion of Larimer county. The dam in the canon is as good a specimen of this class of cost \$7,500.

These are the largest irrigation enterprises in the portion of Colorado nearest Nebraska, though there are hundreds of smaller canals and ditches of great value to the region.

III. -- SOME LARGER COLORADO ENTERPRISES. In other parts of the state, especially in the San Luis, the Gunnison and the Arkansas valleys, there are still larger works of irrigation.

Prominent among them is the Empire canal, in the San Luis valley, which takes water from the Rio Grande fourteen miles above Alamosa and extends southward to the Rio Conejos. This is thirty miles long, sixty feet wide at the head and five and a half feet deep; discharges 1,400 cubic feet per second;

tion of what is locally known as the "English | takes its water from the north fork of the | neer, who should have the oversight of all these enterprises and see that they conformed to the wise laws of the state. The provisions of these laws will be more fully dwelt upon in a subsequent article.

In his message delivered to the legislature during the past week Gover-nor Routt admirably summed up the present relations of the state to this subject. He said that irrigation was the most vital and pressing subject that would come before the legislature; that the people were holding mass meetings in various parts of the state to discuss priority of rights and the use of water for domestic purposes; that this matter called for an early and decisive opinion from the supreme court, and that the legislature should pass effective laws on the subject. He also advocates the establishment of reservoirs, and urges the legislature to call upon congress to assist in this work by speedily donating the arid public lands to the states.

Besides the assistance directly obtained from the state, various forestry, agricultura

## A DAY IN DARKEST OMAHA

Experience of The Bee Reporter in the Homes of the Needy.

THE STRUGGLE FOR MERE EXISTENCE.

Tales of Suffering Which Should Touch the Hearts and Purses of the Happy and Prosperous.

have had for complaint regarding it, the mild weather that has characterized the winter thus far has certainly been a God-send to the unfortunate poor. In a city the size of Omaha there are many

Whatever of just cause the ice dealers may

such, and the amount of suffering that has been averted by the merciful tempering of

the wintry blasts is not to be caculated. There are, within the limits of this happy prosperous, well-lighted and well-fed city. scores of cheerless and forbidding places where poverty and hunger are constant though unwelcome guests. The needy ones who, from necessity and not from choice, are wont to call these places "home" find in them no realization of the comforts and enjoyments that, to the majority of the human family, are so closely associated with that sacred word. After visiting them, one doubts the sentiment of John Howard Payne, that has found a responsive chard in so many hearts, and is will nigh convinced that when

home becomes so humble as this there are other places far more desirable.

True, no cases of heartrending destitution have been discovered this winter, and it is possible that the cases that have been reported do not meet with so ready and gener-ous relief because of the absence of this feature. When the details are particularly feature. When the details are particularly agonizing, there is a tendency on the part of everyone to give spontaneously to relieve such abject want, and the object of the charity is amply provided with necessities and even luxuries, which will last until the case has entirely slipped from the mind of the greater number of the givers.

The scores of cases that demand attention and assistance this winter present their needs in a general call for charity and the response is neither as prompt nor asgenerous as would be the case if harrowing details were pres-ented to awaken the sympathies of those who are naturally charitably inclined.

There are undoubtedly many cases where all needed assistance is given by kind-hearted neighbors, and all knowledge of them is withheld from the public, but where the case demands constant support the strain is too

demands constant support the strain is too heavy for a few to bear, and it is then that an appeal is made to the general public for systematic giving.

Comparatively few of the citizens of Omaha are accustomed to bestowing their charities systematically. The nearest approach to a board of relief outside of the office of the county poormaster is that in connection with St. Timothy's mission and superintended by St. Timothy's mission and superintended by

Missionary Reedy.

A Bre reporter accompanied Mr. Reedy on one of his trips to note the condition and surroundings of some of the families who are deendeat for support on their more fortunate

It was found that the majority of them ex isted in one room hovels, some of them fairly wind and weather proof, and others offering but little resistance to the encroachments of the elements.

first place visited was the little hut family was not known, but when The Bee called public attention to it a number of charitably disposed ladies and gentleman interested themselves in the case, and it was ater taken in charge by Mr. Reedy. The mother of the family of five children is al-

most helpless, suffering from an organic trouble, to remedy which a surgical opera-tion is required. The operation is provided for, together with the necessary medicines, and it is stated that \$20 will furnish such appliances and bandages as may be needed. Two of the boys and one girl are now large enough to be of some service, and the family would be self-supporting with the mother's health restored. Mrs. Reed is a very ener-getic and intelligent woman, and appreciates

geenly her dependent position.

The next case investigated was out amon the hills south of Hanscom park, where a family by the name of Taylor reside in a rough board cabin. Sickness was the cause of their destitution, and the medical help that has been donated has put them on their feet again, and it is not probable that they

will need further help.

A family named Miller was next visited. They live in a 10x12 box near the corner of Twenty-seventh and Masen. The ground is leased for \$2 a month, and the occupant owns a few hundred feet of lumber that entered into the construction of his humble abode Just now, in addition to other cares, he is worried because of a notice to quit the pren ises. All of the surrounding property ha been raised to grade, and the wretched little crib is down in a nole ten feet deep, so that the roof scarcely rises above the level of the

adjacent street. This, of course, is another one room affair and the furniture consists of two beds, two chairs, a three-legged chair backed up in one corner, a badly cracked cook stove and two children. A few dishes momentarily threaten to fall from a narrow shelf over the table, and two or three show bills and advertising calendars serve as bric-a-brac and cover long

catendars serve as once a orac and cover long cracks in the walls at the same time. The head of the family who was formerly a canvasser in the employ of the Metropolitan company is very low with consumption, and looks as though the end might come at any time. His cough seems to shake the hous from foundation to riage pole. Mrs. Mille is energetically endeavoring to support th by washing, but the cost of medic makes it almost hopeless work. One chilwas buried about two weeks ago and charitable people defrayed the funeral expenses. sistance is being rendered the family, but the outlook for the brave little woman who is struggling along against such overwhelming

odds is anything but encouraging. The next stop was at the habitation of Jens Larsen, a day laborer, who resides with constantly increasing family on Fourteenth street just noth of Nicholas. Larger is street just noth of Nicholas. Larsen is "away up" compared with some of the families visited, in that he has two rooms in which to divide his poverty

Which to divide his poverty

His rent has been paid by the Danish so-clety, and free medical assistance has brought him through a severe case of blood poisoning. With a little more help Larsen will be able to

again provide for his family.

Mrs. Sisse is a widow with three children who reside in a primitive little but on Locus street, east of the railroad tracks. One boy aged thirteen years, is a cripple, with a false joint in one leg below the knee, and the mother is afflicted with a running sore on one hip, that renders her helpless much of the time. She makes an attempt to ske out an existence for herself and children over the washboard. The family is sadly in need of continued assistance, and a physician who has examined the case says that a brace ought to be secured at once for the crippled

Assistance was asked by a family named Ruby living near the corner of Ninth and Garfield avenue. The father is seventy-six years of age, and is suffering with asthma. There are five children, all girls, the youngest only two years of age. Missionary Reedy intimated that a man with the apparent vigor of the head of the family ought to contribute more to their support. A little clothing and a few provisions together with places for the cloth of the contribute with places for the cloth of the contribute with places for the contribute with the cloth of the contribute with places for the contribute with the clother with the contribute with older girls to work will probably be all they

will require.

The most pitiable case that was found was that of Mrs. Halph, at the corner of Thirty-third and Maple streets.

Her husband was addicted to drink and

years of age, and the youngest is about six months old. The mother is nursing the two younger children, being ferced to thus nourish the older of the two because of her mability to provide for it in any other way. The house is a diapidated brick, with one window entirely gone, and several panes of class missing from the others. One of the doors is badly demoralized and is little loss than a relic. The neighbors have been contributing for the relief of the family. The case was brought to the attention of the landlord, who was not aware of the state of affairs, and who finally offered to let the family have the house free of rent for the balance of the winter. A fuel merchant, whose attention was called to the case, promptly sent half a ton of coal. Food must be supplied at once. Mrs. Raiph is sadly in need of clothing, both for herself and her little oncs. Medicine will be supplied through the free dispensary cannected with St.

the free dispensary connected with St. Timothy's mission. All puckages contributed for the use of the poor may be left at M. O. Maul's, or will be called for in any part of the city if Mr. Reedy is notified at telephone 225.

### ODDS AND ENDS.

The cotton crop of Alabama is valued at \$50,000,000. There are 15,000 brass bands in this coun

try, with 150,000 performers.

The rails in the United states would go around the earth twelve times. A large oak tree known to be 140 years old has been felled at Flint, Mich.

The deepest hole ever bored into the earth is the artesian well at Petsdam, which is 5,500

feet deep.

Lake Maitland, Orange county, Fla., has a cornet band composed of thirteen young ladies and two gentlemen. Sixty thousand people are out of work in

the city of Berlin. Ninety thousand are out of work in the east end of London alone. The deepest ocean in the world is the Pacific. Near the Ladrone islands a depth of 4,475 fathoms, or over five miles, was found. The number of telephones now underrental by the Bell telephone company is 478,725, an increase of 38,885 over the same time last

Mary Eddy, colored, of Cincinnati has sued a bookbinder to recover her family bible, which she claims she placed with him to be

But one letter is duplicated in the follow ing sentence, which contains all the letters of the alphabet: "Quiz Jack; thy frowns vex G. D. Plumb."

A Chicago man, who for dve years had slept with a revolver under his pillow as a protection against burglars, found it was not loaded in all that time.

South Carolina seems to have a fondness ness for the old soldiers of the rebellion. Over one hundred ex-confederate soldiers are in the legislature of that state.

A jeweller says that it is a rare thing for him to sell a gold watch chain. Everybody buys the plated article nowadays, even tho people who are well able to afford the solid. Casar Hornbeck, colored, who died at Montgomery, N. Y., last week, was known to be over one hundred years old. He claimed to be about one hundred and five years of age.

Animals are kept on the roofs of the houses in Lima, Peru, and it frequently happens that a cow passes her whole life on a roof, being taken there as a calf and brought down finally as fresh beef.

oliver Wendeli Holmes has just invented two more admirable words—"pseudopathy" and "pseudotherapy," one signifying the quack science of disease and the other the quack method of healing.

A sweet potato weighing twenty-seven pounds, raised at Waxahachie, Tex., and a lobster weighing twenty pounds, raised out of deep water off Atlanticville, L. I., are the latest champion heavyweight edibles.

Different classes of substances have been found to affect the organs of taste in the fol-lowing order: Bitters, acids, saline sub-stances, sweets and alkalies. The taste nerves are nearly 2,000 times as sensitive to quinine as to sngar.

The strength of spider silk is incredible. Size for size it is considerably stronger than a bar of steel. An ordinary spider's thread is capable of bearing a weight of three grains, while a steel thread of the same thickness

would support less than two. M. L. Levi, near Newtonville, Ind., has an apple tree which bore three crops in one season. This led to newspaper comment, paragraph fell under the eye of Mrs. Lou Clifford of McCordsville, his sister, whom he had not seen nor heard of for thirty years.

and they were reunited. The orange was originally imported to this country years ago by the mission fathers. who brought the seeds from Spain. They were planted about the old missions, the fruit being used for domestic purposes, and the crop being simply suitable or large enough for these purposes.

It is said that college journalism originated at Dartmouth in 1800, Daniel Webster being editor of the paper. There are now 189 college papers in the United States and only one in England. The four dailies are the Cornel Daily Sun, Daily Crimson, Yale News and the University of Michigan Daily.

A negress named Caroline Jeakins, living rear Houston, Tex., is a veritable Samson Four police officers went to arrest her, when she took them one by one, threw them out of the house and locked the doors upon them. She can break a half-inch rope with ease by stretching it from hand to hand.

It is not always the coal oil or gasolin stove that burns to death. Mrs. George Redpath opened a stove door at Marengo, Ill. with an apron, which caught fire and burne her so badly that she died in a few hours. attempting to put the fire out her husband burned the ends of his fingers off.

Mr. and Mrs.W. Strong of Ottawa, Kan., had arranged to celebrate the fifty-first anniversary of their marriage recently, and relatives were present from various parts of the state to participate in the festivities. In the morning Mr. Strong died and in the afternoon Mrs. Strong passed away.

The greatest meat eaters in the world are the people of America, whose average sumption is 175 pounds per annum. English come next with an average of a little over 110 pounds. The French eat only hal as much meat as the English and the people

of Germany, Austria and Italy still less in the mayor's court at Anthony, Fla., a few days ago a lad for violation of an ordi-nance was fixed \$2. The court granted the boy's mother the privilege of paying the fine or whipping the aid in open court. She ac cepted the latter and the mayor had to cheel

her to prevent an unmerciful whipping. Spectacles were invented just 600 year The use of glass to aid the sight of de fective eves is, however, much older. looked through a concave glass in watching the gladiatorial games, and many other historical men of his day were de-

pendent on similar devices for lengthening their sight. Following is a scientific description what happens when you light a fire: The phospherous on a match is raised by friction to a temperature of 159° farenheit, at which it ignites. It raises the temperature of the sulphur, if it be a sulphur match, 5000, when the sulphur begins to burn. The sulphur raiser the heat to 80012, when the wood taxes

up the work and produces a temperature of 1,000=, at which the coul ignites. Mr. James Fairfield, who is the author of "The Coney Island Waitz," "Sunset Beyond the Missouri," "Omaha Exposition Waltz," has just finished a new musical composition entitled "Governor Boyd's Inaugural March," shortly to be issued by Oliver Ditson com-pany. Critics who have heard the march de-clare it is the author's best work and written

"Nosh's Ark," the new play which is to follow the season of the pantomine of "Bubes in the Wood," at Niblo's, New York, late in February, is not at all descriptive of the days of the flood, but deals with life in the big city. Noah, in this case, being a pawn-broker, and the "Ark" the title by which his loan bureau is known.

The 100th performance of "The Last Word" was reached at Daiy's last night, and the comedy will have achieved one of the best of all the successes at this house, ensuing Tuesday "The School for Sca will be revived in a form varied by Mr. Daly.

# VERDI'S LAST GREAT OPERA.

A Humorous Exposition of Sir John Fal-

staff's Doings. ARRIGO BOITO, THE BOOK MAKER,

The Crowning Composition of the Great Masstro - Ready for the Opining of La Scala During the Season of 1891 and '92.

At intervals, for many years past, the Ital ian composer, Verdi, has revealed to his near friends a desire to write a comic opera-or, as he phrases it, a musical comedy as apart from opera bouffe. But the difficulty in finding a good libretto deferred the attempt so long that the possibility of success passed from the minds of those around him-and after vainly repeated searches through the plays of Goldons, Molicre and other noted playwrights, the maestro himself apparently abandoned the idea, and produced "Othello"

creed otherwise, for in the summer of 1889 Verdi spoke of his cheated hopes to Arrigo Boito, his collaborator-and the clever composer of "Mefistofeio"-who, pondering, retired to Nervi Ligure, near Genoa, and after forty-eight hours' close meditation and work (so it is said), put into Verdi's hands a brusiant sketch of the libretto of "Falstaff," and urged the immediate elaboration of the theme.

Verdi is a jealous guardian of his privacy, and grasping the manuscript with eager hands enjoined upon Boite the

Such was the composer's caution upon 'this Such was the composer's causaspicion, he occasion that, to avoid exciting suspicion, he sent to Venice for his score paper. Aproposes the Venice for the Vendi mules use of of this, it is a fact that Verdi makes use of more paper than any other musical author, not infrequently writing a few bars upon a hundred sheets, only to toss them aside consecutively with nervous disgust, as unlucky

author while working upon it.

Beito has made as much as possible of the character of Falstaff—not confining the appearance of the "Comical Gallant" to that "Most pleasaunt and excellent conceited Comedie of Syr Iohn Falstaff and the Merrie Wives of Windsor," but tenching as well upon the role he bears in the first and second parts of King Henry IV.

Verdi declares the opera to be more than half completed, and his friends add that that signifies its immediate consummation. Although a lyric comedy in the broadest signification of the word, and with no grand massing of chorus, yet it is adapted to the Scala, where it will be a supreme attraction during the season of 1891-2.

the season of 1891-9

which the reckless knight was used to boast,
The name of Kuschmann of European fame
is whispered as the possible here, but Verdi
is not to be influenced by any one in the selection of his artists. There are many important personages in the opera and but few
chorus singers—fifteen men and thirty
women, but of superior excellence. Aside
from this, children will pose before the footlights in the ballet.

Verdi then gave a brief sketch of the plot, position of "Othello." Ricordi then brought mind the fact that twenty-five years ago Boccanegra," and "Othello"—the latter of which was not begun until Verdi had reached

It is strange -almostin congruous -to think of a comic opera from the composer of "Aida" and "Othello," but no more extraordinary than it seemed to the admirers of Wagner that he should contemplate a comic opera after the production of "Tristan and Isolde" in 1865. However the success of the "Meis-

selves especially gifted in an opposite line of work to that in which they had gained their greatest successes, adding that she had always imagined herself particularly suited to sonbrette parts, and Booth had never doubted his great but dormant ability to enact the

photographs of Longfellow—with shining, wavy hair, dreamy eyes and a sensitive mouth and chin. Almost shabbily dressed and timid and retiring in man-ner, he positively suffers when attention is drawn to him in public places—where, as a natural consequence he is rarely to be found—and the sight of his evident distress when dragged repeatedly upon the stage of La Scala, after the triumphant performance of "Othello" in 1887, would certainly have ap-pealed greatly to a less clamorous and excited

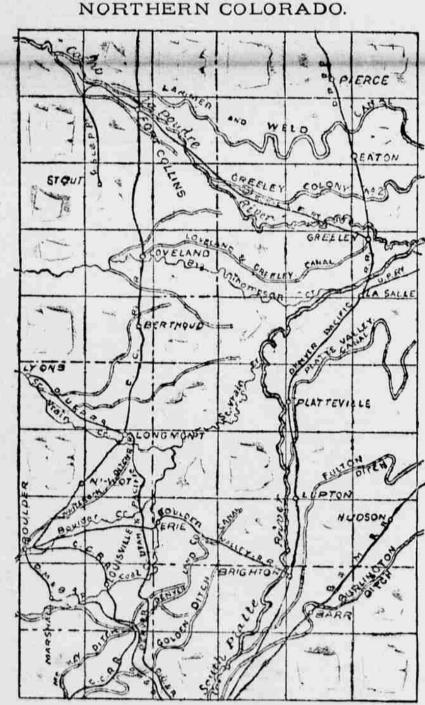
or turning bring better prices than theirs.

Boito in two ways slightly resembles Wagner-first, in his problematical writings, and ner—first, in his problematical writings, and second, in aiming his two-fold faculties (for he is both clever librettist and musician) at the generation of new form and original matter. His successful and beautiful opera "Medistofold," is to be followed by another entitled "Nerone." which was to have been a novelty of the Milan opera season this year. But he cheerfully laid it aside, unwilling to permit escape of the opportunity of writing a libretto for Verdi.

Verdi. It is known that Boito, though so young and sealous has quite lost faith in the illusion of fame, and is more happy to work quietly with his venerated friend, or, baton in hand, lead his well

MIRIAM C. FORD,

## ready alluded to undertook the development



Showing how the South Platte and other streams are harnessed to systems of irrigation

ties available, Colorado has 4,004,409 acres under ditch, for which she has paid, through the investment of private capital, \$11,150,000. Better than this, she has organized all the public and private forces, enacted comprehensive laws, and done various other things to secure the further development of irrigation on the grandest scale How has all this been done; It is a story of persistent energy and untiring efforts directed against difficulties, but aiming at great and

certain results. The first attempt to build a large ditch in Colorado was undertaken in 1860 by a few citizens of Denver. They spont \$10,000 and managed to make a complete failure of it, owing to the lack of experience and the unfortunate fact that their verdant engineer had omitted to give any fall to his grade line. Both the citizens and the engineer retired from the business, but the spirit of enterprise kept on. Two years later the Platte water company's ditch was built with better success, and it still furnishes Denver with its irrigating water. Between 1862 and 1880 the irrigation movement got well under way. Numerous small ditches were made, fully demonstrating the feasibility of the project and a systematic effort begun to interes large capital. Colorado had first to overcom the skepticism of capital, as Nebraska still

has in some measure. The real development of the arid regions in the Centennial state began with the formaof the wide-stretching plans in the northern part of the state. The Platte valley canal takes its source in the Platte river, about three miles north of Lupton, a town twentysix miles north of Denver. The canal has an appropriation of 490 cubic feet per second and can irrigate 20,000 acres. The construction cost about \$35,000. There is a substantial dam in the river, 200 feet long, which cost about \$3,000. From the fact that there are no flumes nor any timber work of any kind on the canal, with the exception of the dam, its maintenance is comparatively inex-

pensive. The Loveland and Greeley canal Is another of the enterprises with which this same company is connected. Its head is located on the Big Thompson near Loveland. It is thirtyone miles long, twenty-six feet wide and five feet deep, with a variable grade. Its appro-priation of water is 446 cubic feet per second, and it is capable of irrigating 22,000 acres, of which nearly one-third is under cultivation. This canal cost about \$150,000. There are two reservoirs near its head, which have each a surface area of nearly fifteen hundred acres. A reservoir has also been constructed at its lower end, on the nill overlooking Greeley, which is capable of holding 2,000,000

cubic feet of water. The North Poudre canal is worthy of mention in this connection. It is a private enterprise and presents some engineering feature; of more than usual interest. The canal

owns 74,000. It has cost \$120,000 and promi-The Del Norte is the largest irrigating canal in the United States. It is sixty-five feet wide on the bottom at the headgate, carrying water five and a half feet deep, with side slopes three to one, making the top width at water line ninety-eight feet. Four miles

northern end of the valley. It cost \$300,000. The peculiar feature in the construction of this canal was the rapidity of its completion, the entire work being accomplished within a

period of four months. ern part of the San Luis valley. It covers

height. The Fort Morgan canal, in the northeast ern part of the state, takes it supply from the Platte river, about ninety miles below Denver. It is twenty-eight miles long and thirty feet wide at the bottom : carries water three and one-half feet deep and has a slope of one in 3,300; capacity something over three hundred and forty cubic feet per second. It irrigates 20,000 acres and cost about \$95,000.

IV .- HOW THE STATE POSTERS IRRIGATION. It is neither possible or necessary within the limits of this article to describe more fully the progress of irrigation in Colorado. The object is to show that our neighbors have successfully overcome every difficulty which we are now facing, and thereby point the way to the speedy and complete reclamation of our arid lands. For this purpose, how ever, it is very essential that the work done

In his report to Governor Adams of Decem

by the state should be understood.

ber, 1888, J. S. Greene, state engineer of irrigation, used these words: "But, however

covers 120,000 acres, of which the company and fruit growers' associations are giving their influence systematically to the deand are guarding it from every standpoint, from the preservation of the fertifization of the farthest acre on the edge of the arid belt.

> conviction of the value of irrigation that the work has been brought to its present stage in Colorado. It is by smiller has nods, in cooperation with private capital and local enterprise, that a great empire west of the 100th ous.

of all its mines. Could there be a more eloquent tribute to irrigation? In closing this sketch of the progress in Colorado I leave untouched a mass of material on the subject for lack of space. But enough has been said to prove the truth of an

minerals. But, without a single foot of natu-

would read: "What Colorado has done, Nebraska can do." Next week's article will deal with the irrigation laws of Neoraska and the urgent demands for their revision and enlargement, a subject rendered timely by the approaching convention at McCook.

'Is Bronson a single man?" "Not quite. He's about haif a man."

"Is my hat on straight?" laBachelor-Does your wife always have the

Somehow papa tells his fairy tales to namma instead of to the little ones. And

I tells you dot is funny.

I haven't got zwei donar left, And she got alimony. A New York husband was so insanely ealous that he would take his wife's shoes with him when he went to work so that she

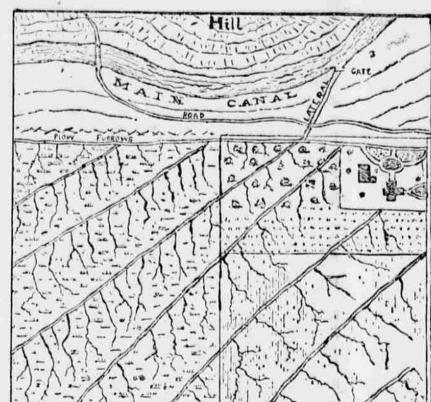
Hicks—Maria, I den't believe you would wake up if Gabriel were to blow his horn! Mrs. Hicks—You would; the faintest suggestion of a horn would rout you out early.

charge! oner-No, sir. I'm not fool enough to talk against two women.

Bingo-Dear me, Pm tired. My wife got me up at 6 o'clock this morning. Kingley-What did she get you up so early

less than eight months he had carned \$200 and kept sober every day. It is the women who do the proposing in Dahomey. When a girl reaches the age of eighteen she is eligible for matrimeny and she at once sets out to find some one willing to marry her. Frequently she takes a hus-

James Paris, a Tennessean, was to hunt, and his good wife loaded his gun for all day. When he drew a bead on a squirrel there was a crash and a bang, and, while the



THE METHOD OF IRRIGATION.

The water enters the lateral from the main canal when the gate is raised, and runs into a distributing disch at the head of the field. It is then diverted to the plow furrows, which are dammed at frequent intervals, causing the water to distribute itself over the entire field.

ses to be a most profitable investment.

from the head it is bifurcated: the larger branch being forty-two feet wide at the bottom and the smaller branch thirty-eight feet wide. There are about fitty miles of main channel. It carries something over 2,400 cubic feet of water per second and | meridian in Nebraska can be made prosperis circulated to irrigate over 200,000 acres. It is located in the San Luis valley in southern California, takes its supply from the Rio It abounds in silver, gold, iron, coal and other Granderiver and covers the land in the

The Citizens' can al is in the same neighborhood, taking its supply from the Rio Grande river, eight miles below the Del Norte and on the opposite side of the river. It is designed to irrigate the lands in the southwest-

190,000 peres and cost \$200,000. The Uncompangre canal, in the west central part of the state, covers about sixty-five thousand acres of the lands of the Uncompahre valley. The entire valley has a considerable fall to the north, about sixty feet to the mile, which gives the canal the appearance of having an ascending grade, and ne cessitates the frequent use of drops or overfalls. The entire cost of this canal was \$210.

The Grand river canal system in the extreme western part of the state, is a combination of three canals, projected and largely built by the farmers of the Grand river valley, but purchased and united by the present owners. The combined appropriating capacity is 680 cubic feet per second. There are about sixty-five miles of main channel, covering some forty thousand acres. A striking feature is numerous overfalls or "drops,"

ranging from four feet to thirty-six feet in

ers are under way and irrigation is still in the full tide of development.

Besides these large enterprises many oth-

energetic her people may have been, how ver skilled in construction or fruitful in resources, it was in the legislative halls and the court rooms that they fostered best Colorado's wonderful development in irrigation enterprises." In other words, there would have been no capitalists, no grand undertakings, if the executive and legislative officers of the commonwealth, and all manner of pubic associations, had not united in an effort to push the agricultural development of the state. That is the point which the people of Nebraska must comprehend at this juncture In the first place, Colorado has given great attention to her laws bearing on the subject of irrigation. She has constantly broadened them to meet the growing demands of the subject and only recently has appointed a commission to completely revise them. The object has been to encourage capital, to proteet the water supply, to guarantee equal opportunities to all parts of the state. A very important step in reaching these ends was the appointment of a competent state engi-

velopment of irrigation in all directions, water supply on the mountain tops to the It was by means of this deep and carnest

Colorado ranks high among mining states,

rally arable land, its agricultural product in the year 1890 exceeded in value the output old proverb, wnich, revised for the occasion,

## WILLIAM E. SMYTHE. CONNUBIALITIES.

The average wife hates to ask her husband for money and in most cases he bates to have "So your wife has left you?" "She has."
"What were her last words on leaving you?"

Benedict (sadly)-Never; I invariably get Grand Rapids leads the world in its per-centage of divorces to marriages. This year the ratio was one to five and last year one to

mamma is generally not enough of a little one to swallow them all. He-Are you intimately acquainted with She (from Chicago)-Only slightly. I was married to him once.

Mem frau is gone, divorced away-

could not go out in his absence. He-What remedy would you suggest for the deplorable condition of the marriage laws? -Appropriate penalties. First offence sentence; second, for life!

Judge-You are charged with bigamy, Mr. Smith. Have you adything to say to the Mrs. Grumps—If that stranger you were talking to said nothing about his wife, how do you know he is married!

Mr. Grumps—Oh, he looked so sort o' sympathetic when I told him I was.

Bingo-She wanted to catch the noon train. For seven years a Hooster named Pete Dayton had obliged his wife to support the family by washing and he had left an average of \$1 per week in the saldons. The White Caps took him out and thrashed him and in

band on trial for a month or two before choosing him for better or worse.

in his happiest vein.

finally ran away and deserted her, leaving her with four small children and no means of support. The oldest child is under five

as the finale of his life work. But evidently fate, or providence, or whatever people in general put their faith in, de-

greatest secreey, forbidding even the mention of the task to Riccordi, his publisher, who incurred his displeasure before the pro-duction of "Othello" by giving certain hints to the press without receiving permission to

and vain attempts.

Verdi is lavish in genuine praise of Boito's librette—considering it a chef d'covre and of so thoroughly comical a nature 'as to afford the greatest amusement to himself and the author while working upon it.

Boit has made as week as possible of the

"Falstaff" is divided into three acts and the title role is to be sustained by a baritone, and a baritone, moreover, possessed of a rocione, as the Italians say, proportionate in strength to the "waist two yards about," of which the reckless knight was used to boast.

lights in the ballet. It was at a dinner party at the Hotel Milano that Verdi and Boito first made their work known. Verdi's guests were the publishers, Ricordi and his beautiful wife Ginditta their daughter and son-in-law. When the champagne appeared, Boito rose, glass in hand, gave a toast to the success of glass in hand, gave a toast to the success of the "Pancione" (big fat fellow). Each guest gazed inquiringly at the other without com-prehending. Then he gave a toast to "Fal-staff," and Signora Ricordi was the first to divine that Pancione meant Falstaff, and that 'Falstaff'' was the title of a new opera by

showing that Boito had clung as closely to the Shakespearean text as he had in his com-Verdi announced to him the intention of retiring upon his laurels—and, indeed, for several years the fertile and vivid imagina-tion seemed at rest. But, fortunately for all music-loving people, the genius that gave to the world "Trovatore" and "Traviata" had not finished its course, and further efforts resulted in the production of "Aida," "Don Carlos, " "Manzoni's Requieum," "Simon

his seventieth year.

The grand old man of Italy, as a contemporary calls him, is bale and bearty and in wonderfully good spirits-hoping even to witness a gala performance of "Palstaff" on his eightieth birthday, which will occur in

tersivger" a year later more than justified the attempt. The latter masterpiece is as the attempt. The latter masterplets harmonious as it is comical, depending really harmonious as it is comical. Not at all the upon a study of character. Not at all the "comic work" that French composers take in hand. And Verdi's "Falstaff" is of a similar These freaks of genius bring to mind some thing I once heard Modjeska affirm—a belief she held that artists invariably fancied them-

In appearance Verdi strongly resembles the

He spends most of his time at his country place, and works for hours each day over his vegetable garden, which Signora Verdi insists takes only second place in his affections. The peasants around are devoted to him, and never grumble if the "maestro's" tomatoes

friend, or, baton in hand, lead his well drilled orchestra in an artistic interpretation of Verdi's creations, than seek new honors for himself in the same field.